

Remarks

Claims 49-66 and 69-83 are canceled without prejudice. Thus, claims 67-68 are presented for further consideration.

The term "oligonucleotide" in claims 67 and 68 is corrected to "oligonucleotides" as indicated in the office action dated January 26, 2006.

The objection to claim 72 should be rendered moot.

Attached is Form PTO/SB/08 listing all references disclosed in the information disclosure statement filed on September 21, 2004. It is requested that the listed references be made of record for the subject application.

Claims 67 and 68 stand rejected for indefiniteness under 35 U.S.C. 112, second paragraph.

The office action states that the phrase "first and second double-stranded oligonucleotides" is confusing in light of the later use of the terms "the first oligonucleotide DNA strand" and "a second oligonucleotide strand". The applicants respectfully traverse this rejection. It is clear to someone skilled in the art that the first double-stranded oligonucleotide comprises two complementary strands and that the reference in the claim to the first oligonucleotide strand focuses on the composition of one strand of the first double-stranded oligonucleotide. In addition, the specific structure, *i.e.* the 5' to 3' orientation of various sequence elements, of the first oligonucleotide strand in turn determines the structure of the other, complementary strand of the first double-stranded oligonucleotide. A similar situation would apply with the second double-stranded oligonucleotide and the second oligonucleotide strand, the complement of which would be the other strand of the second double-stranded oligonucleotide.

For even further clarification of this in the claims, the claims now refer to the first "double-stranded" oligonucleotide as comprising a "first oligonucleotide strand." The first reference to "DNA" in this regard is removed to parallel the language used for the "second oligonucleotide strand" of the second "double-stranded" oligonucleotide, which is also now specified in the claims for further clarification.

The office action also states that the terms “the two arms” and “the desired insert” lack sufficient antecedent basis. To further clarify the claims in these regards, the claims now refer to “the two homology arms”, and “the target DNA sequence” is now used in place of “the desired insert.” Accordingly, the word “two” is inserted in line 21 of claim 67 and line 16 of claim 68, respectively, to clarify that these parts of the claims refer to the same two homology arms previously described. A further amendment in lines 25 of claim 67 and line 18 of claim 68, respectively, clarifies that the “desired insert” which is located between the homology arms is the “target DNA sequence”.

The office action states that the terms “a vector” and “the vector” in claims 67 and 68, respectively, lack antecedent basis. To provide further clarification in this regard, part b) of claims 67 and 68 now recites “a vector comprising said vector DNA strand”. This should also render moot the issue regarding claim 67 and the essential steps.

The office action states that claims 67 and 68 are unclear because of the terms “the homologous sequence”, numerous references to “homology arms”, and “nucleotide sequences homologous to the homology arms.” To clarify the meaning and the respective reference to homologous sequences, references (A'), (B'), (C'), (D'), (B), (C) and (D) derived from Fig. 1A-C are added. Fig. 1A-C illustrates relative positions of the three elements used in the methods of claims 67 and 68, *i.e.* the vector DNA, the adaptor oligonucleotides, and the target DNA. Furthermore, “the homologous sequences” is replaced with “the first and second termini”. Given these reference numbers and the teachings in the specification, all of the terms in the claims should be clear to one skilled in the art.

Claim 68 stands rejected for not reciting the “homology arms” and the “origin of replication of the vector DNA” along with their 5' to 3' orientation and the two termini and the 3' to 5' orientation of the target DNA. A description of these elements, resembling the one in claim 67, is added into claim 68.

The rejections of claim 72 for reciting the limitation “the selectable marker” is rendered moot by the cancellation of claim 72.

In light of all the foregoing, the withdrawal of all the rejections under 35 U.S.C. 112, second paragraph, is respectfully requested.

Claim 72 stands rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. This rejection should be rendered moot, as claim 72 is cancelled.

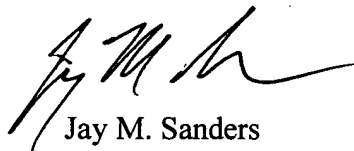
Claims 67 and 68 stand rejected under 35 U.S.C. 101 as claiming the same invention as that claimed in claims 53 and 54 of prior U.S. patent No. 6,355,412. The applicants respectfully traverse this rejection. Claims 67 and 68 indicate that "the orientation of the two homology arms (A, B) relative to the target DNA sequence being the same as the orientation of the homologous sequence relative to the target DNA so that recombination between the two homology arms and the first and second results in the target DNA sequence being inserted between the homology arms". This is not specified in claims 53 and 54 of US 6,355,412 B1. Thus, the withdrawal of this double patenting rejection is respectfully requested.

The applicants believe that this application is in condition for allowance, and such action is earnestly solicited.

The Assistant Commissioner is hereby authorized to charge any fees under 37 CFR §§1.16 and 1.17 as required by this paper to Deposit Account 19-0065.

The applicants invite the Examiner to call the undersigned if clarification is needed on any of this response, or if the Examiner believes a telephonic interview would expedite the prosecution of the subject application to completion.

Respectfully submitted,



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Attachments: Form PTO/SB/08
Petition and Fee for Extension of Time